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PA-Score 1.0 Scoresheets
TENNECO (AKA KALAMA CHEMICAL) - 01/04/92

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WASTE CHARACTERISTICS

Waste Characteristics (WC) Calculations:

1 WASTE UNIT 5 Contaminated soil Ref: 2 WQ value maximum
Area 2.00E+00 acres 2.56E+00 2.56E+00
AREA OF CONCERN BECAUSE OF HIGH DETECTED CONCENTRATIONS OF BENZENE,
TOLUENE AND PAHS.
Ref: 2

| Waste Characteristics Score: WC = 18

Ground Water Pathway Criteria List
Suspected Release

Are sources poorly contained? (y/n/u)	Y
Is the source a type likely to contribute to ground water contamination (e.g., wet lagoon)? (y/n/u)	Y
Is waste quantity particularly large? (y/n/u)	N
Is precipitation heavy? (y/n/u)	N
Is the infiltration rate high? (y/n/u)	N
Is the site located in an area of karst terrain? (y/n)	N
Is the subsurface highly permeable or conductive? (y/n/u)	N
Is drinking water drawn from a shallow aquifer? (y/n/u)	N
Are suspected contaminants highly mobile in ground water? (y/n/u)	Y
Does analytical or circumstantial evidence suggest ground water contamination? (y/n/u)	Y
Other criteria? (y/n)	Y ANALYTICAL DATA
SUSPECTED RELEASE? (y/n)	
Y	

Summarize the rationale for Suspected Release:

ANALYTICAL DATA INDICATE THAT THERE HAVE BEEN RELEASES OF
CONTAMINANTS TO THE GROUNDWATER.

Ground Water Pathway Criteria List
Primary Targets

Is any drinking water well nearby? (y/n/u)	N
Has any nearby drinking water well been closed? (y/n/u)	Y
Has any nearby drinking water well user reported foul-testing or foul-smelling water? (y/n/u)	U
Does any nearby well have a large drawdown/high production rate? (y/n/u)	N
Is any drinking water well located between the site and other wells that are suspected to be exposed to a hazardous substance? (y/n/u)	U
Does analytical or circumstantial evidence suggest contamination at a drinking water well? (y/n/u)	U
Does any drinking water well warrant sampling? (y/n/u)	N
Other criteria? (y/n)	N

PRIMARY TARGET(S) IDENTIFIED? (y/n) N

Summarize the rationale for Primary Targets:

GROUND WATER PATHWAY SCORESHEETS

Pathway Characteristics

			Ref.
Do you suspect a release? (y/n)	Yes		
Is the site located in karst terrain? (y/n)	No		2
Depth to aquifer (feet):	35		2
Distance to the nearest drinking water well (feet):	0		13
LIKELIHOOD OF RELEASE	Suspected Release	No Suspected Release	References
1. SUSPECTED RELEASE	550		
2. NO SUSPECTED RELEASE		0	
LR =	550	0	

Targets

TARGETS	Suspected Release	No Suspected Release	References
3. PRIMARY TARGET POPULATION 0 person(s)	0		
4. SECONDARY TARGET POPULATION Are any wells part of a blended system? (y/n) N	0	0	
5. NEAREST WELL	0	0	
6. WELLHEAD PROTECTION AREA None within 4 Miles	0	0	
7. RESOURCES	5	0	
T =	5	0	

WASTE CHARACTERISTICS

WC =	18	0
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GROUND WATER PATHWAY SCORE:

1

Ground Water Target Populations

Primary Target Population Drinking Water Well ID	Dist. (miles)	Population Served	Reference	Value
None				
Total				

Secondary Target Population Distance Categories	Population Served	Reference	Value
0 to 1/4 mile	0	013	0
Greater than 1/4 to 1/2 mile	0	13	0
Greater than 1/2 to 1 mile	0	13	0
Greater than 1 to 2 miles	0	13	0
Greater than 2 to 3 miles	0	13	0
Greater than 3 to 4 miles	0	13	0
Total			0

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Apportionment Documentation for a Blended System

Surface Water Pathway Criteria List
Suspected Release

Is surface water nearby? (y/n/u)	Y
Is waste quantity particularly large? (y/n/u)	N
Is the drainage area large? (y/n/u)	N
Is rainfall heavy? (y/n/u)	N
Is the infiltration rate low? (y/n/u)	Y
Are sources poorly contained or prone to runoff or flooding? (y/n/u)	N
Is a runoff route well defined(e.g.ditch/channel to surf.water)? (y/n/u)	Y
Is vegetation stressed along the probable runoff path? (y/n/u)	N
Are sediments or water unnaturally discolored? (y/n/u)	N
Is wildlife unnaturally absent? (y/n/u)	N
Has deposition of waste into surface water been observed? (y/n/u)	N
Is ground water discharge to surface water likely? (y/n/u)	Y
Does analytical/circumstantial evidence suggest S.W. contam? (y/n/u)	N
Other criteria? (y/n)	N
runoff discharges via drains to river	
SUSPECTED RELEASE? (y/n)	
N	

Summarize the rationale for Suspected Release:

No evidence exists of surficial soil contamination. Most of the site is paved. There is no contamination within 0-2 feet in areas that are not paved.

Ref: 2, 4

Surface Water Pathway Criteria List
Primary Targets

Is any target nearby? (y/n/u) If yes: Y
N Drinking water intake
N Fishery
Y Sensitive environment

Has any intake, fishery, or recreational area been closed? (y/n/u) N

Does analytical or circumstantial evidence suggest surface water
contamination at or downstream of a target? (y/n/u) N

Does any target warrant sampling? (y/n/u) If yes: N
N Drinking water intake
N Fishery
U Sensitive environment

Other criteria? (y/n) N

PRIMARY INTAKE(S) IDENTIFIED? (y/n) N

Summarize the rationale for Primary Intakes:

Drinking water is provided by the Passaic Valley Reservoir. No
primary targets are located within the are of concern.

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Other criteria? (y/n) N

PRIMARY FISHERY(IES) IDENTIFIED? (y/n) N

Summarize the rationale for Primary Fisheries:

Other criteria? (y/n) N

PRIMARY SENSITIVE ENVIRONMENT(S) IDENTIFIED? (y/n) N

Summarize the rationale for Primary Sensitive Environments:

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SURFACE WATER PATHWAY SCORESHEETS

Pathway Characteristics

			Ref.
Do you suspect a release? (y/n)	No		
Distance to surface water (feet):	94		2
Flood frequency (years):	100		24
What is the downstream distance (miles) to:			
a. the nearest drinking water intake?	0.0		12
b. the nearest fishery?	0.0		
c. the nearest sensitive environment?	0.0		
LIKELIHOOD OF RELEASE	Suspected Release	No Suspected Release	References
1. SUSPECTED RELEASE	0		
2. NO SUSPECTED RELEASE		500	
LR =	0	500	

Drinking Water Threat Targets

TARGETS	Suspected Release	No Suspected Release	References
3. Determine the water body type, flow (if applicable), and number of people served by each drinking water intake.			
4. PRIMARY TARGET POPULATION 0 person(s)	0		
5. SECONDARY TARGET POPULATION Are any intakes part of a blended system? (y/n): N	0	0	
6. NEAREST INTAKE	0	20	
7. RESOURCES	0	5	
T =	0	25	

Drinking Water Threat Target Populations

Intake Name	Primary (y/n)	Water Body Type/Flow	Population Served	Ref.	Value
1 none	N		0		0
Total Primary Target Population Value					0
Total Secondary Target Population Value					0

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Apportionment Documentation for a Blended System

Human Food Chain Threat Targets

TARGETS	Suspected Release	No Suspected Release	References
8. Determine the water body type and flow for each fishery within the target limit.			
9. PRIMARY FISHERIES	0		
10. SECONDARY FISHERIES	0	0	
T =	0	0	

Human Food Chain Threat Targets

Fishery Name	Primary (y/n)	Water Body Type/Flow	Ref.	Value
None				
Total Primary Fisheries Value				0
Total Secondary Fisheries Value				0

Environmental Threat Targets

TARGETS	Suspected Release	No Suspected Release	References
11. Determine the water body type and flow (if applicable) for each sensitive environment.			
12. PRIMARY SENSITIVE ENVIRONMENTS	0		
13. SECONDARY SENSITIVE ENVIRONS.	0	10	
T =	0	10	

Environmental Threat Targets

Sensitive Environment Name	Primary (y/n)	Water Body Type/Flow	Ref.	Value
1 Open Water, Passaic River	N	>10000 cfs	1,2,4	0
None				
Total Primary Sensitive Environments Value				0
Total Secondary Sensitive Environments Value				0

CONFIDENTIAL**Surface Water Pathway Threat Scores**

Threat	Likelihood of Release(LR) Score	Targets(T) Score	Pathway Waste Characteristics (WC) Score	Threat Score LR x T x WC / 82,500
Drinking Water	500	25	18	3
Human Food Chain	500	0	18	0
Environmental	500	10	18	1

SURFACE WATER PATHWAY SCORE:**4**

Soil Exposure Pathway Criteria List
Resident Population

Is any residence, school, or daycare facility on or
within 200 feet of an area of suspected contamination? (y/n/u) Y

Is any residence, school, or daycare facility located on adjacent
land previously owned or leased by the site owner/operator? (y/n/u) U

Is there a migration route that might spread hazardous
substances near residences, schools, or daycare facilities? (y/n/u) N

Have onsite or adjacent residents or students reported adverse
health effects, exclusive of apparent drinking water or air
contamination problems? (y/n/u) Y

Does any neighboring property warrant sampling? (y/n/u) U

Other criteria? (y/n) N

RESIDENT POPULATION IDENTIFIED? (y/n) N

Summarize the rationale for Resident Population:

The site is 25 % paved and 50 % building occupied. Most of the contamination at the site soils have been found at depths greater than 2 feet. Therefore, it is not suspected that residents within 200 feet of the areas (Waste Area No. 5) of contamination are exposed to site soil contamination.

SOIL EXPOSURE PATHWAY SCORESHEETS

Pathway Characteristics

	Ref.
Do any people live on or within 200 ft of areas of suspected contamination? (y/n)	Yes 22
Do any people attend school or daycare on or within 200 ft of areas of suspected contamination? (y/n)	Yes 20
Is the facility active? (y/n):	Yes 11

LIKELIHOOD OF EXPOSURE	Suspected Contamination	References
1. SUSPECTED CONTAMINATION LE =	550	

Targets

2. RESIDENT POPULATION 0 resident(s) 0 school/daycare student(s)	0	
3. RESIDENT INDIVIDUAL	0	
4. WORKERS 1 - 100	5	
5. TERRES. SENSITIVE ENVIRONMENTS	25	
6. RESOURCES	5	
T =	35	

WASTE CHARACTERISTICS

WC = 18

RESIDENT POPULATION THREAT SCORE: 4

NEARBY POPULATION THREAT SCORE: 2

Population Within 1 Mile: 10,001 - 50,000

SOIL EXPOSURE PATHWAY SCORE: 6

Soil Exposure Pathway Terrestrial Sensitive Environments

Terrestrial Sensitive Environment Name	Reference	Value
1 Open Water, Passaic River	25	25
Total Terrestrial Sensitive Environments Value		25

Air Pathway Criteria List
Suspected Release

Are odors currently reported? (y/n/u)	Y
Has release of a hazardous substance to the air been directly observed? (y/n/u)	Y
Are there reports of adverse health effects (e.g., headaches, nausea, dizziness) potentially resulting from migration of hazardous substances through the air? (y/n/u)	U
Does analytical/circumstantial evidence suggest release to air? (y/n/u)	Y
Other criteria? (y/n)	Y

SUSPECTED RELEASE? (y/n)	Y
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Summarize the rationale for Suspected Release:

Evidence exists that releases to the atmosphere have occurred.
Toluene, benzoic acid dust, smog, salicylic powder, vapors and odors
have been reportedly released by the facility.

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AIR PATHWAY SCORESHEETS

Pathway Characteristics

			Ref.
Do you suspect a release? (y/n)			Yes
Distance to the nearest individual (feet):			100
			2,11
LIKELIHOOD OF RELEASE	Suspected Release	No Suspected Release	References
1. SUSPECTED RELEASE	550		
2. NO SUSPECTED RELEASE		0	
LR =	550	0	

Targets

TARGETS	Suspected Release	No Suspected Release	References
3. PRIMARY TARGET POPULATION 3277 person(s)	32770		
4. SECONDARY TARGET POPULATION	142	0	
5. NEAREST INDIVIDUAL	50	0	
6. PRIMARY SENSITIVE ENVIRONS.	25		
7. SECONDARY SENSITIVE ENVIRONS.	0	0	
8. RESOURCES	5	0	
T =	32992	0	

WASTE CHARACTERISTICS

WC = | 32 | 0 |

AIR PATHWAY SCORE:

| 100 |

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Air Pathway Secondary Target Populations

Distance Categories	Population	References	Value
Onsite	N.A.		0
Greater than 0 to 1/4 mile	N.A.		0
Greater than 1/4 to 1/2 mile	8819	22,23	28
Greater than 1/2 to 1 mile	25210	22,23	26
Greater than 1 to 2 miles	94770	22,23	27
Greater than 2 to 3 miles	123036	22,23	38
Greater than 3 to 4 miles	133222	22,23	23
Total Secondary Population Value			142

Air Pathway Primary Sensitive Environments

Sensitive Environment Name	Reference	Value
1 Open Water, Passaic River	1,2,4	25
Total Primary Sensitive Environments Value		25

Air Pathway Secondary Sensitive Environments

Sensitive Environment Name	Distance	Reference	Value
1 none	onsite		0.0
Total Secondary Sensitive Environments Value			

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SITE SCORE CALCULATION	SCORE
GROUND WATER PATHWAY SCORE:	1
SURFACE WATER PATHWAY SCORE:	4
SOIL EXPOSURE PATHWAY SCORE:	6
AIR PATHWAY SCORE:	100
SITE SCORE:	50

SUMMARY

1. Is there a high possibility of a threat to any nearby drinking water well(s) by migration of a hazardous substance in ground water? No

If yes, identify the well(s).

If yes, how many people are served by the threatened well(s)? 0

2. Is there a high possibility of a threat to any of the following by hazardous substance migration in surface water?
- A. Drinking water intake No
 - B. Fishery No
 - C. Sensitive environment (wetland, critical habitat, others) No

If yes, identity the target(s).

3. Is there a high possibility of an area of surficial contamination within 200 feet of any residence, school, or daycare facility? No

If yes, identify the properties and estimate the associated population(s)

4. Are there public health concerns at this site that are not addressed by PA scoring considerations? No

If yes, explain: